

**What is claimed is:**

1. A method for identifying spatio-spectral features of one or more objects comprising the steps of:

- 5           a. collecting one or more hyperspectral datacubes of a first set of one or more objects;
- b. building a spectrometric model from said hyperspectral datacubes;
- c. illuminating a second set of one or more objects with energy-weighted spectral bands that relate to the model in step (b) using a tunable light source;
- 10          d. measuring the energy resulting from the illumination in step (c); and
- e. using the measurements in step (d) to identify spatio-spectral features of the illuminated object(s).

15          2. The method of claim 1, wherein said tunable light source comprises a spatial light modulator.

3. A device for identifying spatio-spectral features of one or more objects, comprising:

- 20          a. means for collecting hyperspectral datacubes;
- b. means for building spectrometric models;
- c. tunable light source means;
- d. means for illuminating one or more objects with energy-weighted spectral bands that relate to spectrometric models; and
- 25          e. means for measuring the energy resulting from illumination by said means for illuminating.

4. The device of claim 3, wherein said tunable light source comprises a spatial light modulator.